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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,240	03/15/2001	Hideo Ando	204331US-2S	6633

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EXAMINER
CHIEU, PO LIN

ART UNIT	PAPER NUMBER
2615	

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

	Application No.	Applicant(s)
Office Action Summary	09/808,240	ANDO ET AL.
	Examiner	**Art Unit**	
	Polin Chieu	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>20 February 2003</u> .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>20-31</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>20-31</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☒ None of:

       1.☒ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____ .

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)	4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) ☐ Notice of Informal Patent Application (PTO-152)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .	6) ☐ Other: .

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed 2/20/03 have been fully considered but they are not

persuasive. A video object is composed of MPEG stream data; therefore, a video

object is considered to be a stream object as well.

2.   This Application in a divisional of Application 09/666129, which is currently

unavailable. The examiner has indicated that none of the Priority Papers have been

received; however, the examiner believes that the Priority Papers are with the Parent

Application. Additionally the references cited in the IDS have not been provided, but are

believed to be with the Parent Application.

3.   Ando et al (6,373,803), which was cited in the response, was not previously

considered. Ando et al appears to be the same inventive entity and to be commonly

owned, raising double patenting issues. Since the double patenting rejection below was

not previously issued in the prior office action, this action is non-final.

Double Patenting

4.   The nonstatutory double patenting rejection is based on a judicially created
doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the
unjustified or improper timewise extension of the "right to exclude" granted by a patent
and to prevent possible harassment by multiple assignees. See In re Goodman, 11
F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225
USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA
1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, In re Thorington,
418 F.2d 528, 163 USPQ 644 (CCPA 1969).
        A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be
used to overcome an actual or provisional rejection based on a nonstatutory double
patenting ground provided the conflicting application or patent is shown to be commonly
owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5.   Claims 20-24 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 5 of U.S. Patent No. 6,373,803 in view of Saeki et al (6,078,727) and Lenihan et al (6,169,843). Claim 5 of 6,373,803 discloses an information recording method using an information medium which has a data area for recording stream data using data packets and data units, each of the data units being larger than the data packets, and a management area for recording management information (header); a stream object formed of stream data, including at least one of first data units, at least one second data unit having the at least one first data unit, and at least one third data unit having the at least one second data unit, the at least one third data unit storing header information relating to the at least one first data unit in the at least one third data unit. However, Claim 5 of 6,373,803 does not discloses constituting the stream data, constituting each of the data units, constituting the management information, and recording the stream data (claim 20); recording at least a time difference value (claim 21); determining the time difference value (claim 22); computing the time difference value (claim 23); and recording a time stamp (claim 24).

Saeki et al teaches one or more of data units included in stream data (fig. 10); each one of the data units (VOBU) includes one or more data packets (fig. 10); and the memory is a memory device which has a data area for recording the stream data using the one or more data packets (fig. 6, AV FILE1), each one of the data units (VOBU)

being larger than the one or more data packets (fig. 10), and a management area for recording the management information that pertains to the stream data (AVDATA MANAGEMENT FILE).

Lenihan et al teaches recording time stamp information (PTS or DTS) in at least one of the packets (col. 5, lines 1-19); and a arrival time stamp (ATS) indicating the arrival time of a first packet of a first one of the plurality of data units (col. 7, lines 34-42).

It would have been highly desirable to have presentation time stamps (PTS) and/or decoding time stamps (DTS) so that the device can determine the proper time to display and/or decode data from an optical disc recording medium. Lenihan et al teaches that it would have been highly desirable to have management information indicating the arrival time of a first packet so that proper synchronization on playback is achieved. In fact Lenihan et al suggests the use of his teaching in an optical disc system (col. 4, lines 1-17)

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to record time stamp information and management information indicating the arrival time of a first packet in the device of Saeki et al.

Regarding claims 21, Saeki et al discloses recording, in the management area, at least a time difference value (fig. 11) corresponding to a difference between a first time stamp recorded in a first data unit and a second time stamp recorded in a second data unit, said first and second data units being included in the plurality of said data units (col. 10, line 22 – col. 11, line 37).

Regarding claims 22, Saeki et al does not explicitly disclose determining the time difference value by rounding to a predetermined number of effective digits a difference between a time information value corresponding to the second time stamp and a time information value corresponding to the first time stamp.

Saeki et al discloses determining a time difference by determining the time difference between two time stamps, as discussed in the art rejection of claim 21. It is well known in art of mathematics to round to a predetermined number of digits. For example, 1/3 is often rounded of to a predetermined number of digits, such as .333. However, 1/3 is not a finite number.

It would have been highly desirable to round the time difference value to a predetermined number of digits to simplify the time difference operation and reduce the number of bits needed to store the time difference value.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to round the time difference value to a predetermined number of effective digits in the device of Saeki et al.

Regarding claims 23, Saeki et al discloses computing the time difference value using a value of the first time stamp recorded in the first one of the data packets located in each of the data units (col. 10, line 22 – col. 11, line 37).

Regarding claim 24, Saeki et al discloses computing the time difference (col. 10, line 22 – col. 11, line 37). However, Saeki et al does not disclose recording a time stamp in one of the data packets at an end of a last one of the data units included in the stream data indicating an arrival time of a last one of the data packets in the last one of

the data units; and computing the time difference value using the arrival time of the last one of the data packets.

Lenihan et al teaches recording a time stamp in one of the data packets at an end of a last one of the data units included in the stream data indicating an arrival time of a last one of the data packets in the last one of the data units (col. 8, lines 1-5). Lenihan et al teaches that the ATS are used to determine if a discontinuity exist in the ATS (col. 3, lines 12-22). If a discontinuity exists (e.g. a dropped packet of data) then the time difference information according to first and second time stamps would not be correct because the first and second time stamps have not been corrected for the discontinuity. Therefore, it would have been obvious to compute the time difference value using the arrival time to insure that a correct time difference is obtained.

Lenihan et al teaches that it would have been highly desirable to record a time stamp at the end of a last one of the data units so that there is significantly improved flexibility in both recording and playback of transport packets (col. 8, lines 1-20). It would have been highly desirable to compute the time difference using the arrival time of the last one of the data packets so that the calculated time difference is corrected for discontinuities in the stream data.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to record a time stamp at the end of a last one of the data units; and compute a time difference using the arrival time in the device of Saeki et al.

Additionally regarding claims 24 and 29, the examiner considers Lenihan et al to teach computing of the time difference value using the arrival time of the last one of the

data packets in a different manner. Therefore, an additional art rejection regarding

claims 24 and 29 is provided below.

Regarding claim 24 and 29, Saeki et al does not disclose recording a time stamp

in one of the data packets at an end of a last one of the data units included in the

stream data indicating an arrival time of a last one of the data packets in the last one of

the data units; and computing the time difference value using the underlined arrival time of the last

one of the data packets.

Lenihan et al teaches recording a time stamp in one of the data packets at an

end of a last one of the data units included in the stream data indicating an arrival time

of a last one of the data packets in the last one of the data units (col. 8, lines 1-5); and

computing the time difference value using the arrival time of the last one of the data

packets (col. 12, line 9-25). Note: a comparison to determine if a value is greater than

another value is determined by taking the difference between two values, and

determining if the result is zero, positive (means the first value is greater than the

second), or negative (means the first value is less than the second).

Lenihan et al teaches that it would have been highly desirable to record a time

stamp at the end of a last one of the data units so that there is significantly improved

flexibility in both recording and playback of transport packets (col. 8, lines 1-20). It

would have been highly desirable to compute the time difference using the arrival time

of the last one of the data packets so that the device can be determined if further time

stamp discontinuities exist.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to record a time stamp at the end of a last one of the data units; and compute a time difference using the arrival time in the device of Saeki et al.

6.   Claims 25-29 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,373,803 in view of Saeki et al and Lenihan et al. A data structure stored in memory including, one or more of the data units included in the stream data, management information (header), the information medium has a data area for recording the stream data unit the one or more data packets, and a management area for recording the management information, and the data structure includes a stream object formed of stream data, including at least one first data unit, at least one second data unit having the at least one first data unit, and at least one third data unit having the at least one second data unit. As discussed in the previous obviousness-type double patenting rejection of claim 21, Saeki et al and Lenihan et al teach management information and time stamp information. Please refer to the obviousness-type double patenting rejection of claim 21.

The limitations of claims 26-29 were discussed in the obviousness-type double patenting rejection of claims 21-24. Please refer to the obviousness-type double patenting rejection of claims 21-24.

7.   Claims 30-31 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,373,803 in view of Saeki et al. Claim 1 of 6,373,803 discloses a data area for recording stream

data using data packets and data units, each of the data units being larger than the data

packets, and a management area for recording management information; a stream

object, formed of the stream data, including at least one first data unit, at least one

second data unit having the at least one second data unit, and at least one third data

unit having the at least one second data unit, and the at least one third data unit storing

header information relating the at least one first data unit in the at least third data unit.

However, claim 5 of 6,373,803 does not disclose a receiver block, recorder block, a

reproducer block, and a decoder block.

Saeki et al teaches a receiver block (9, fig. 15), a recorder block (3), a reproducer

block (3), and a decoder block (4, 5).

It would have been highly desirable to have a receiver block, a recorder block, a

reproducer block, and a decoder block so that the stream object could be recorded to

and reproduced from a recording medium.

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time of the invention to have a receiver block, a recorder block, a reproducer block,

and a decoder block in the device of claim 1 of U.S. Patent No. 6,373,803.

Claim Rejections - 35 USC § 102

8.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

Claims 30 and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by

Saeki et al (6,087,727).

Regarding claim 30, Saeki et al discloses an information storage medium which

has a data area for recording stream data unit data packets (V_PCK) and data units

(VOBU), each of the data units being larger that the data packets, and a management

area (fig. 8) for recording management information; a stream object (fig. 10), formed of

the stream data (col. 12, lines 21-26), including at least one first data unit (V_PCK), at

least one second data unit having the at least one first data unit (VOBU), and at least

one third data unit having the at least one second data unit (VOB), the at least one third

data unit storing header information (col. 10, lines 12-21) relating to the at least one first

data unit in the at least one third data unit; a receiver block configured to receive the

stream data with said data structure (9, fig. 15); and a recorder block configured to

record the stream data, received by the receiver block (3).

Regarding claim 31, Saeki et al discloses an information storage medium which

has a data area for recording stream data unit data packets (V_PCK) and data units

(VOBU), each of the data units being larger that the data packets, and a management

area (fig. 8) for recording management information; a stream object (fig. 10), formed of

the stream data (col. 12, lines 21-26), including at least one first data unit (V_PCK), at

least one second data unit having the at least one first data unit (VOBU), and at least

one third data unit having the at least one second data unit (VOB), the at least one third

data unit storing header information (col. 10, lines 12-21) relating to the at least one first

data unit in the at least one third data unit; a reproducer bock configured to reproduce

the stream data with said data structure from the information medium (3, fig. 15); and a

decoder block configured to decode the stream data reproduced by the reproducer

block (4,5).

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

10.   Claims 20-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Saeki et al (6,078,727) in view of Lenihan et al (6,169,843).

Regarding claims 20 and 25, Saeki et al discloses a stream object (fig. 10),

formed of the stream data (col. 12, lines 21-26), including at least one first data unit

(V_PCK), at least one second data unit having the at least one first data unit (VOBU),

and at least one third data unit having the at least one second data unit (VOB), the at

least one third data unit storing header information (col. 10, lines 12-21) relating to the

at least one first data unit in the at least one third data unit; one or more of data units

included in stream data (fig. 10); each one of the data units (VOBU) includes one or

more data packets (fig. 10); and the memory is a memory device which has a data area

for recording the stream data using the one or more data packets (fig. 6, AV FILE1),

each one of the data units (VOBU) being larger than the one or more data packets (fig. 10), and a management area for recording the management information that pertains to the stream data (AVDATA MANAGEMENT FILE). However, Saeki et al does not disclose having time stamp information, and management information indicating an arrival time of a first packet of one of the data units.

Lenihan et al teaches recording time stamp information (PTS or DTS) in at least one of the packets (col. 5, lines 1-19); and a arrival time stamp (ATS) indicating the arrival time of a first packet of a first one of the plurality of data units (col. 7, lines 34-42).

It would have been highly desirable to have presentation time stamps (PTS) and/or decoding time stamps (DTS) so that the device can determine the proper time to display and/or decode data from an optical disc recording medium. Lenihan et al teaches that it would have been highly desirable to have management information indicating the arrival time of a first packet so that proper synchronization on playback is achieved. In fact Lenihan et al suggests the use of his teaching in an optical disc system (col. 4, lines 1-17)

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to record time stamp information and management information indicating the arrival time of a first packet in the device of Saeki et al.

Regarding claims 21 and 26, Saeki et al discloses recording, in the management area, at least a time difference value (fig. 11) corresponding to a difference between a first time stamp recorded in a first data unit and a second time stamp recorded in a

second data unit, said first and second data units being included in the plurality of said

data units (col. 10, line 22 – col. 11, line 37).

Regarding claims 22 and 27, Saeki et al does not explicitly disclose determining

the time difference value by rounding to a predetermined number of effective digits a

difference between a time information value corresponding to the second time stamp

and a time information value corresponding to the first time stamp.

Saeki et al discloses determining a time difference by determining the time

difference between two time stamps, as discussed in the art rejection of claim 21. It is

well known in art of mathematics to round to a predetermined number of digits. For

example, 1/3 is often rounded of to a predetermined number of digits, such as .333.

However, 1/3 is not a finite number.

It would have been highly desirable to round the time difference value to a

predetermined number of digits to simplify the time difference operation and reduce the

number of bits needed to store the time difference value.

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time of the invention to round the time difference value to a predetermined number

of effective digits in the device of Saeki et al.

Regarding claims 23 and 28, Saeki et al discloses computing the time difference

value using a value of the first time stamp recorded in the first one of the data packets

located in each of the data units (col. 10, line 22 – col. 11, line 37).

Regarding claim 24 and 29, Saeki et al discloses computing the time difference

(col. 10, line 22 – col. 11, line 37). However, Saeki et al does not disclose recording a

time stamp in one of the data packets at an end of a last one of the data units included

in the stream data indicating an arrival time of a last one of the data packets in the last

one of the data units; and computing the time difference value using the arrival time of

the last one of the data packets.

Lenihan et al teaches recording a time stamp in one of the data packets at an

end of a last one of the data units included in the stream data indicating an arrival time

of a last one of the data packets in the last one of the data units (col. 8, lines 1-5).

Lenihan et al teaches that the ATS are used to determine if a discontinuity exist in the

ATS (col. 3, lines 12-22). If a discontinuity exists (e.g. a dropped packet of data) then

the time difference information according to first and second time stamps would not be

correct because the first and second time stamps have not been corrected for the

discontinuity. Therefore, it would have been obvious to compute the time difference

value using the arrival time to insure that a correct time difference is obtained.

Lenihan et al teaches that it would have been highly desirable to record a time

stamp at the end of a last one of the data units so that there is significantly improved

flexibility in both recording and playback of transport packets (col. 8, lines 1-20). It

would have been highly desirable to compute the time difference using the arrival time

of the last one of the data packets so that the calculated time difference is corrected for

discontinuities in the stream data.

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time of the invention to record a time stamp at the end of a last one of the data units;

and compute a time difference using the arrival time in the device of Saeki et al.

Additionally regarding claims 24 and 29, the examiner considers Lenihan et al to teach computing of the time difference value using the arrival time of the last one of the data packets in a different manner. Therefore, an additional art rejection regarding claims 24 and 29 is provided below.

Regarding claim 24 and 29, Saeki et al does not disclose recording a time stamp in one of the data packets at an end of a last one of the data units included in the stream data indicating an arrival time of a last one of the data packets in the last one of the data units; and computing the time difference value using the <u>arrival time</u> of the last one of the data packets.

Lenihan et al teaches recording a time stamp in one of the data packets at an end of a last one of the data units included in the stream data indicating an arrival time of a last one of the data packets in the last one of the data units (col. 8, lines 1-5); and computing the time difference value using the arrival time of the last one of the data packets (col. 12, line 9-25). Note: a comparison to determine if a value is greater than another value is determined by taking the difference between two values, and determining if the result is zero, positive (means the first value is greater than the second), or negative (means the first value is less than the second).

Lenihan et al teaches that it would have been highly desirable to record a time stamp at the end of a last one of the data units so that there is significantly improved flexibility in both recording and playback of transport packets (col. 8, lines 1-20). It would have been highly desirable to compute the time difference using the arrival time

of the last one of the data packets so that the device can be determined if further time

stamp discontinuities exist.

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time of the invention to record a time stamp at the end of a last one of the data units;

and compute a time difference using the arrival time in the device of Saeki et al.

Conclusion

11.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. Ando et al was cited by the Applicant in the remarks, Ando et al

discloses stream objects.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Polin Chieu whose telephone number is (703) 308-6070.

The examiner can normally be reached on M-Th 8:00 AM-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Andrew B. Christensen can be reached on (703) 308-9644. The fax phone

numbers for the organization where this application or proceeding is assigned are (703)

872-9314 for regular communications and (703) 872-9314 for After Final

.communications.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal

Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the Technology Center 2600 Customer Service Office

whose telephone number is (703) 306-0377.

PC
May 15, 2003

ANDREW CHRISTENSEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600